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## NOTES

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### NOTES ON THE IRRIGATION SITUATION

#### NORTH PLATTE VALLEY

The North Platte Valley in Nebraska is as yet little developed. It has a good water supply, favorable climatic conditions, and good soil, but poor railroad connections and service. The irrigable lands lie chiefly on the north side of the river, and those immediately adjoining the stream are covered by small ditches, most of which are owned by the farmers who use the water. These are controlled by stock companies, the stock being held by the farmers, and the water furnished by the ditches is divided on the basis of the stock owned.

In 1887 plans were made for a ditch covering the higher and better lands on the benches extending east from the Wyoming line, some eighty miles. Much of the land under the line of this proposed ditch was homesteaded in the belief that this ditch was to be built. Only a short section of the ditch was constructed, and the rights of the company which proposed this construction have been in litigation for a number of years. The original company claimed the right to the full amount of water which it would have acquired by the construction originally planned, while another party filed an application with the state board for water to cover the land under the line of the ditch beyond the present construction, claiming that the original company had no right to water for this land. In addition, the farmers owning the land under the proposed ditch organized an irrigation district and applied for a right to water from the river to irrigate their own lands. The supreme court of the state during the past year decided that the original company still had the right granted it upon the condition of the construction of the canal, and the court further held that this right was exclusive, that is, that no other parties could acquire the right to water for the same land which was to be irrigated by the original company. This places the farmers under this ditch line in a peculiar situation. They own the land to be reclaimed, but have absolutely no voice in determining who shall supply them with water. In Nebraska, in order to acquire the right to divert water from a stream, application must be made to the state

board of irrigation, which grants permits to construct works to reclaim certain specified tracts of land. The law makes no provision for giving the owners of the land a hearing, but parties owning none of the land to be reclaimed may make application to the board and secure a permit to build works for its reclamation, and under the recent decision above referred to no other permit for this same land can be granted, leaving the owners of the land at the mercy of the holder of the permit. In this case the company which holds the right has done practically nothing for at least ten years; yet its rights are not declared abandoned, but are held to bar the landowners from providing themselves a water supply in any other way. Some other states have provided by law for the regulation of rates which may be charged for water by companies supplying water by sale or rental, but as yet Nebraska has not made even this provision for the protection of water-users.

At present what land is irrigated in this section is largely in small holdings, and is used for raising grain and forage; but a company of promoters has formed a plan for developing the sugar-beet industry there. The company claims that experience has shown that sugar companies cannot depend on landowning farmers to supply them with the necessary quantity of beets for economical operation, and that, therefore, they must control the lands and establish a tenant system of farming under which the company can control the crops grown. The establishment of a sugar factory requires an investment of something like a million dollars, and the company claims that it cannot make such a large investment without this assurance of sufficient acreage of beets. This company controls the rights for the proposed canal previously mentioned, which is to cover the lands to be irrigated; but these lands are held in small holdings, and the holders, desiring to secure the rise in value due to the canal construction, are indisposed to sell. In order that it may secure the land at the lowest possible prices, the company is doing everything in its power to "bear" the price of the land. One of the methods employed to accomplish this end is most peculiar. Agents of the promoters have gone to the farmers owning the stock of the co-operative companies controlling the small ditches and represented to them that their ditch stock is of no value to them, as the ditch companies are common carriers and are obliged to supply them with water even if they own no stock, and have purchased ditch stock wherever possible. In this way these agents have secured control of a number of these

co-operative companies and are endeavoring to secure control of the others. After securing this control, they have gone among the farmers and said to them: "We now control your ditch companies, and are going to build this new ditch so that we shall have absolute control of all the water which is available for your lands. We intend to charge you for water \$5 per acre per year, which is more than you can pay under your present system of farming, and the only thing for you to do is to sell us the land and move out or become our tenants." The decision of the supreme court before referred to adds force to this argument, since under that decision the farmers cannot build new ditches to cover their lands, as the promoters hold exclusive rights.

During the summer of 1904 the people in the North Platte Valley woke up to the situation and attempted to stop the acquiring of control of the co-operative stock companies by this new company. In one instance the new company had sufficient stock to give it control of a ditch, except for one man's holdings, on which it had an option, and the certificates of stock had been deposited in a bank pending the taking up of this option. When the other stockholders realized the condition of the company, they sued for an injunction to stop the delivery of this stock to the new company and to prevent this company from voting the stock in case it was delivered. This case is still pending.

In their efforts to protect themselves, the stockholders of a number of these small companies attempted to form irrigation districts. In a stock company the votes are in proportion to the stock held, and the holder of a majority of the stock can control the company. In an irrigation district each owner of forty acres has one vote, but no one person has more than one vote no matter how large his land-holdings. Thus, in an irrigation district the new company would be compelled to own practically all the lands in order to control the affairs of the district, instead of a majority of the stock as in the case of a stock company. These efforts to form irrigation districts have, however, failed on account of the inability of the farmers to agree on some matters of detail. Several irrigation districts are in successful operation in this section, and it is probable that the organization of districts would have accomplished the purpose for which the organization was attempted.

This is one of the most striking instances, of which the writer has any knowledge, of the conflict between the old American ideal of a community settled by the landowning farmers largely independent of

each other, and the new commercial ideals where everything else is sacrificed to the largest output, regardless of the social conditions which will be created by the new régime. There can be no question but that the new plans, if carried out, will bring about a much higher development of this section than that now existing, or that will come into being for a number of years under present policies; and it is very likely that under the new conditions the present farmers, if they remain as tenants, will secure a better living, since the company must give them enough to allow them to live up to the standard of living in other communities in order to keep them. Yet it is hard for one brought up with the landowning ideals to look with favor upon this change in our agricultural system.

#### IRRIGATION DISTRICTS

Most of the arid states have laws providing for the organization of irrigation districts. These correspond in a way to internal improvement or drainage districts in other states. The formation of a district, the location of its boundaries, and the construction of irrigation works are submitted to a vote of the landowners of the proposed district, and the district when organized has power to issue bonds to pay for the construction of works and power to levy taxes to pay interest on these bonds, create a sinking fund, and pay charges for maintenance and operation of the works. The bonds issued are made a lien upon the land, since the lands can be sold for district taxes the same as for any other delinquent taxes.

In some states the taxes are to be levied on the assessed value of the land, and in others taxes must be a flat rate per acre; but the main feature is that all land within the district is taxed for district purposes. The organization and operation of the districts are subject to public supervision, usually by the county commissioners. The main object of the organization of these districts is the selling of bonds to secure money for the construction of works. Looked at from the standpoint of the speculative holder of lands, or of the landowner who does not wish to irrigate, the organization of a district is an attempt to compel him to build works for the irrigation of the lands of another and is, therefore, an injustice. From the standpoint of those who wish to use the water, it is an attempt to secure to the district the increased value of the land within the district which is due to the construction of the works. They claim that the building of a ditch to reclaim these lands increases the value of all the lands in the district

alike, and that the parties not intending to irrigate secure this rise in value as well as those who do intend to use the water, and should therefore be compelled to pay district taxes. The effect of this taxing of all property within the district is to force development, since the taxes would soon exceed the value of idle land. In some irrigation districts in California the taxes are as high as \$1.50 per acre per year, which in a few years will exceed the increased value due to the construction of the works, provided the lands remain unimproved. The lands must be developed in order to pay this tax.

The district law of Idaho divides the district taxes into two classes—those for interest and sinking fund, and those for maintenance and operation. All the lands within the district are taxed for interest and sinking fund, while the cost of maintenance and operation is paid by those using water. In some districts in Nebraska the owners of unimproved lands are offering them to tenants free of charge for a number of years, if they will prepare them for the application of water and pay the district taxes.

Without the organization of a district only the lands using water could be compelled to contribute to the cost of construction or the cost of maintenance and operation. This has been the cause of the failure of a great many ditch companies. Ditches have been built to reclaim large areas, but settlement has been slow, so that for a great many years only small parts of the lands covered could be made to contribute to the support of the enterprises. The settlers who are using water could not stand charges heavy enough to pay interest on the investments, and the companies building the ditches had either to abandon them or run them at a loss. This point is strikingly illustrated in the case of two districts in California. The area of the Modesto irrigation district is 81,143 acres, while only 6,895 acres were irrigated during 1904. The district taxes for that year were \$102,884.60, or \$1.27 per acre on the entire acreage of the district; but if this whole tax had been paid by the lands actually irrigated, it would have amounted to \$14.92 per acre, which would have been prohibitive. The area of the Turlock district is 176,210 acres, while 20,000 acres were irrigated in 1904. The district taxes for 1904 were \$98,786.75, which averages \$0.56 per acre on the whole acreage, and \$4.94 per acre on the acreage actually irrigated.

During the last two years a number of districts have been organized in Colorado to buy in irrigation works built by investment companies and to take control of ditches which needed large improvements,

as it is claimed by some promoters in Colorado that the organization of districts is the only way in which money can be secured for irrigation works. One such promoter, who has had a great deal to do with the construction of ditches in Colorado, stated that he would not loan a cent of money on a ditch controlled in any other way, and that he would not take as a gift the best ditch in Colorado if compelled to operate it. The law of Colorado gives the county commissioners power to fix the rates which may be charged by ditch companies, and under this law a ditch taken under foreclosure could be practically confiscated, since the farmers elect the board which fixes the rates which may be charged by the ditch-owner after foreclosure. On the other hand, the district bonds are a lien on the lands, and are, therefore, good security for the money advanced.

In most states the law providing for the sale of bonds prohibits their sale for less than 95 per cent. of their face value. This practically prohibits their sale, but the laws allow the issuing of bonds in payment for work or for the purchase of works already built. The latter provision makes it possible to evade the former. In case a district is organized to buy a ditch already constructed an agreement is made with the owners of the ditch, the price being fixed on the basis of a payment in bonds of the district. In this way the bonds may be nominally sold for par, while they are actually sold far below par, since the price of the ditch may be raised to any amount above its cash value. If the construction of new works is in contemplation, an agreement is made with the contractor, under which he is to take his pay in district bonds, and he fixes his price accordingly.

During the summer of 1904 the farmers under the Highline Ditch at Denver were negotiating with the owners of that ditch for its purchase, and the owners made two prices, one a cash price and the other a bond price. The Fort Morgan irrigation district was organized by the farmers under the Fort Morgan Canal for the purpose of building a reservoir, and before the bonds were voted an agreement was made with a contractor to build the works for a certain price in bonds; and the same thing is true of the Julesburg irrigation district just organized in Colorado. The Gering irrigation district in Nebraska secured the construction of its canal in the same way. Its bonds can be purchased for 25 cents on the dollar, but yet the district kept within the terms of the law prohibiting the sale of its bonds for less than 95 cents.

In the arid region much of the land still belongs to the general

government, and a large part also belongs to the states under grants from the government. These lands, of course, cannot be taxed for district purposes, but Idaho and Nebraska in 1903 provided means for making state lands contribute to district expenses. Nebraska provided for the taxing of leaseholds on state lands for district purposes, and allow the sale of these leaseholds for delinquent taxes. Idaho provided for the payment of district taxes by the state on its lands within the boundaries of the districts, the amount of the taxes paid to be added to the price of the lands when sold by the state. This is an indirect way of providing for state aid in construction of irrigation works. It would seem to be possible to organize irrigation districts in which a very large part of the land would belong to the state, and the state would thus be compelled to pay for the construction of irrigation works, and district taxes on unimproved lands would soon amount to enough, when added to the price of the land, to make its sale impossible. The state, however, has one check upon the organization of such districts. Its law provides that all proposed districts must be approved by the state engineer.

#### SOME FEATURES OF CANAL MANAGEMENT

During the dry years of the early nineties several large canals were constructed along the Platte River in Nebraska. This region had been settled by farmers under the impression that it had the same climatic conditions as eastern Nebraska, and that agriculture could be successfully carried on there without irrigation. A series of dry years, however, led them to believe that this was not the case, and that for successful farming irrigation was necessary. Under these conditions the farmers were enthusiastic for the building of irrigation works, and capitalists, believing that the farmers must have water, were equally favorable.

Two companies built large canals. They had, however, different theories as to the proper management of an enterprise of this kind. One company endeavored to sell water rights for a price which would repay the cost of construction, and under agreements which provided for the payment of annual assessments to cover the cost of maintenance and operation, and to yield a profit on the investment. This company has steadily refused to supply any water to farmers who have not purchased water rights, striving in this way to compel the farmers to purchase rights for the sake of securing the purchase of



the right, but more especially to secure a large number of the farmers who will be paying the annual maintenance dues.

The other company has as consistently refused to sell any water rights, hoping to be able to secure high prices for water in dry years when the necessities of the farmers are great.

About the time these canals were ready to supply water, the series of dry years came to an end, and only occasionally since then has irrigation been necessary to the raising of crops, although in most years it would have been an advantage. The result has been that neither canal in ordinary years supplies very much water for irrigation. But the company which sold water rights has an income from the annual dues, which must be paid whether water is drawn or not, while the company which has refused to sell rights, preferring to depend upon the necessities of the farmers, has found itself with a large ditch to maintain, with no income to defray the expenses. The management of this latter canal has recently changed, and the new manager gives it as his opinion that the company could well afford to give away water rights for the sake of securing an annual income, such as the other company has from its water-right holders.

From the standpoint of the farmers, the purchase of a water right and the payment of annual dues, in a section like this where irrigation is necessary only occasionally, is in the nature of a payment for insurance rather than a payment for water, and in that light is not a hardship, and is not generally considered so. Most of the farmers pay the annual dues willingly, even in wet years when they receive no water from the canal. Under the other system, when the necessity is the greatest, the means for paying for water are likely to be the least, while the prices charged will be increased according to the necessities. This payment, too, will all come in the hard years, while with the other system it is distributed through the good years when the payments can be easily made. From the standpoint of both the investor and the farmer, then, the water-right system seems to be preferable to the system of disposing of water to whoever applies, and charging whatever the necessities of the case will compel the farmers to pay.

In a former number of this magazine<sup>1</sup> the writer gave it as his opinion that the best form of canal organization was one in which such water rights were sold with the provision for turning the works over to the purchasers of water rights when the purchase price had

<sup>1</sup> Vol. XII, No. 2.

been paid. During the summer of 1904 some instances were found where companies organized on this basis had sold the prescribed number of rights and were ready to turn the works over to the farmers, but the farmers preferred to have the original company continue to operate the canal, the farmers continuing to make the annual payments agreed upon in their original contracts. They were satisfied with the management, and preferred to have one superintendent with ample authority, and not directly responsible to them or dependent upon them for his position, to operate the canal. There is, however, the danger in such an arrangement that a change in management might be unsatisfactory, when the farmers would have no redress.

That the co-operative stock company with the stock in the hands of the farmers using the water is generally regarded as the most satisfactory system of canal management is borne out by data collected by the writer in Colorado in 1904. It was found that in the districts watered by the South Platte River and its tributaries in Colorado about 85 per cent. of the land is watered by canals controlled in this way.

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## CENSUS STATISTICS OF CHILD LABOR

In drawing conclusions from statistics of the United States Census it is of first importance that we understand that variations in census methods of enumeration, and in the degree of efficiency with which the canvass had been conducted from decade to decade, render naïve comparisons of these statistics impossible. Failure to recognize this fact results inevitably in serious error and has often led to conclusions that are precisely the opposite of the truth.

While this criticism of incomparability is to some extent applicable to all census data, it is especially applicable to census statistics relating to the employment of children.

Following the publication of the reports of 1890, eminent economists and statistical authorities, comparing the figures of child labor of that census with those of the census of 1880, drew the conclusion that there had been a great decrease in the number of children at work. That this conclusion was erroneous is evident when the figures of 1880 and 1890 are compared with those of the present